










ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	System and Method for Multiple-Input Multiple-Output (MIMO) Radio Communication						
Application Number:	10/627537						
Confirmation Number:	3568						
First Named Applicant:	Gary Sugar						
Attorney Docket Number:	Cognio29US						
Art Unit:	2811						
Search string:	(6636568 or 6473467 or 6141393 or 6008760 or 6331837 or 6252548 or 6377819 or 6351499 or 6317466 or 6097771 or 6400699 or 6298092 or 6362781 or 6400780 or 5437055 or 5394435 or 6122260 or 6442214 or 6058105 or 6144711 or 6377631 or 6327310 or 6351499 or 20020118781 or 20030125090 or 20030139194 or 20020196842 or 20030108117 or 20020127978 or 20020067309 or 20020039884 or 20010015999 or 20010015994 or 20010046255 or 20010053143 or 20020118781 or 20020122383 or 20020085643 or 20020064246 or 20020141355 or 20020136170 or 20020001316 or 20020072392 or 20020122501).pn.						
US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	6636568	2003-10-21	Kadous	B2	375	255
	2	6473467	2002-10-29	Wallace et al.	B1	375	267
	3	6141393	2000-10-31	Thomas et al.		375	347
	4	6008760	1999-12-28	Shattil		342	378
	5	6331837	2001-12-18	Shattil		342	378
	6	6252548	2001-06-26	Jeon	B1	342	383
	7	6377819	2002-04-23	Gesbert et al.	B1	455	562
	8	6351499	2002-02-26	Paulraj et al.	B1	375	267

9	6317466	2001-11-13	Foschini et al.	B1	375	267
10	6097771	2000-08-01	Foschini		375	346
11	6400699	2002-06-04	Airy et al.	B1	370	329
12	6298092	2001-10-02	Heath, Jr. et al.	B1	375	267
13	6362781	2002-03-26	Thomas et al.	B1	342	383
14	6400780	2002-06-04	Rashid-Farrokhi et al.	B1	375	347
15	5437055	1995-07-25	Wheatley, III		455	33.3
16	5394435	1995-02-28	Weerackody		375	206
17	6122260	2000-09-19	Liu et al.		370	280
18	6442214	2002-08-27	Boleskei et al.	B1	375	299
19	6058105	2000-05-02	Hochwald et al.		370	310
20	6144711	2000-11-07	Raleigh et al.		375	347
21	6377631	2002-04-23	Raleigh	B1	375	299
22	6327310	2001-12-04	Hochwald et al.	B1	375	259
23	6351499	2002-02-26	Paulraj et al.	B1	375	267

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
Spn	1	20020118781	2002-08-29	Thomas et al.	A1	375	347
	2	20030125090	2003-07-03	Zeira	A1	455	562
	3	20030139194	2003-07-24	Onggosanusi et al.	A1	455	506
	4	20020196842	2002-12-26	Onggosanusi et al.	A1	375	148
	5	20030108117	2003-06-12	Ketchum et al.	A1	375	295
	6	20020127978	2002-09-12	Khatri	A1	455	103
	7	20020067309	2002-06-06	Baker et al.	A1	342	367
	8	20020039884	2002-04-04	Raynes et al.	A1	455	13.3
	9	20010015999	2001-08-23	Nam	A1	375	148
	10	20010015994	2001-08-23	Nam	A1	375	130
	11	20010046255	2001-11-29	Shattil	A1	375	142
	12	20010053143	2001-12-20	Li et al.	A1	370	344
	13	20020118781	2002-08-29	Thomas et al.	A1	375	347
	14	20020122383	2002-09-05	Wu et al.	A1	370	210
	15	20020085643	2002-07-04	Kitchener et al.	A1	375	267
	16	20020064246	2002-05-30	Kelkar et al.	A1	375	347

17	20020141355	2002-10-03	Struhsaker et al.	A1	370	280
18	20020136170	2002-09-26	Struhsaker	A1	370	280
19	20020001316	2002-01-03	Hornsby et al.	A1	370	487
20	20020072392	2002-06-13	Awater et al.	A1	455	561
21	20020122501	2002-09-05	Awater	A1	375	262

Signature

Examiner Name	Date
Simon Dyman	11/18/04

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.: Cognio29US
SERIAL NO.: 10/627,537
APPLICANT(S): Sugar et al.GROUP ART UNIT: 2811
FILING DATE: July 25, 2003
TODAY'S DATE: January 16, 2004

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/Subclass	Translation (Yes or No)
AA	WO02/03568 A1	01/10/2002	International	H04B 7/02	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

*Examiner Initial	Author, Title, Date, Pertinent Pages, Etc
SPD BA	Shtrom, et al., "Designing MIMO Systems for Reliable Coverage in Non-LOS Wireless Links," October 2002, www.rfdesign.com .
BB	Balaban et al., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-Part II: Numerical Results," IEEE Transactions on Communications, May 1992.
BC	Chuah et al., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment," November 1998, IEEE Globecom.
BD	Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems," November 2002, Proceedings of IEEE Globecom.
BE	Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel," Proceedings of ISSSE-98, September, 1998.
BF	Jakes, William C., "Microwave Mobile Communications," IEEE Press, 1974, pages 313-320, 489-498.
BG	Morgan, Samuel P. "Interaction of Adaptive Arrays in an Arbitrary Environment," The Bell System Technical Journal, January, 1965, pages 23-47.
BH	Yeh, Y.S. "An Analysis of Adaptive Retransmission Arrays in a Fading Environment," The Bell System Technical Journal, October, 1970, pages 1811-1825.
BI	"Lucent Technologies' Chips Poised to Bring "BLAST" Multiple Input/Multiple Output Technology to Laptops, PDAs and Other Mobile Devices," October 16, 2002, Lucent Technologies Press Release.
BJ	Yang et al., "On Joint Transmitter and Receiver Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems," December, 1994, IEEE Transactions on Communications, Vol. 42, No. 12, pages 3221-3231.

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GROUP ART UNIT: 2811
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<u>911</u> BK	Ivrlac, Michel et al., "On Channel Capacity of Correlated MIMO Channels," ITG Fokusprojekt: Mobilkommunikation" Systeme mit intelligenten Antennen", Ilmenau, 2001.
BL	Meyer-Ottens, Sven et al., "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate," March 9, 2001
BM	Iserte, Antonio Pascual et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM," IST Summit 2001 (IST Mobile Communications Summit), September, 2001.
BN	Lee, Dennis et al., "Antenna Diversity for an OFDM System in a Fading Channel," Proceeding of IEEE MILCOM 1999, November, 1999, pages 1104-1109.
BO	Iserte, Antonio Pascual et al., "Joint Beamforming Strategies in OFDM-MIMO Systems," ICASSP 2002 (IEEE International Conference on Acoustics, Speech and Signal Processing), May, 2002.
BP	Raleigh et al., "Spatio-Temporal Coding for Wireless Communication," IEEE Transactions on Communications, Vol 46., No. 3, March 1998, pp. 357-366.
BQ	Jungnickel et al., "A MIMO WLAN Based on Linear Channel Inversion," IEEE Seminar-MIMO Communication Systems from Concept to Implementation, December, 2001, pp. 20/1-20/6.
BR	Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems," IEEE VTC 2001, September, 2001, pp. 1553-1557.
BS	Golden et al., "V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel," Bell Laboratories, Lucent Technologies, Proc. Int'l Symposium on Advanced Radio Technologies, September 10, 1998.
BT	Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST space-time communication architecture," Electronic Letters, January 7, 1999, vol. 35, No. 1.
BU	BLAST High-Level Overview, Lucent Technologies, July 18, 2000.

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s)